Total Recall? Testing Immediate Recall Does Not Measure Effectiveness of Pre-Travel Visits

To the Editor-in-Chief:

Earlier this year, I presented on the topic of travelers’ diarrhea to a large group of doctors, pharmacists, and nurse practitioners as part of an academic day sponsored by our university. The audience was exposed to a 20-minute short-snapper lecture. I prepared the presentation with the knowledge that it had to be kept to a minimum of slides containing a few key “take home” messages. When I finished the presentation and fielded a few questions from the audience within the short time remaining, I also ensured that they could contact me by email for any additional questions should such arise in the coming week. However, I did not expect this group of smart professionals to remember every nugget of information imparted during my lecture. We do not expect our colleagues to have total recall of our continuing educational talks, so why would we expect the same of a layperson about to travel overseas?

So it was with some surprise and concern that I read the original article by McGuinness and colleagues1 with the associated editorial by McIntosh.2 The premise of the research was that the effectiveness of the pre-travel consultation could be measured in part by immediate and total recall of clients attending a large travel health clinic. McIntosh stated that “a prime objective of the pre-travel consultation is to improve the traveler’s understanding of travel-related health risks and hazards...” McGuinness and colleagues3 went on to state that “risk perception among travelers is variable and erroneous beliefs and misunderstandings may exist... Providing appropriate pre-travel advice is therefore considered important...” The authors then proceeded to conduct a KAP (ie, “knowledge, attitudes, and practices”) study, testing a convenience sample involving a questionnaire tool following a non-standardized educational intervention provided by 18 different doctors on a wide range of travel-related subjects that likely would have been influenced by the traveler’s intended itinerary. Does immediate or even long-term recall of such information have any direct relationship to the effectiveness of a pre-travel consultation?

An alternative view is that the primary objective of such a consultation is to create an effective provider–client relationship, which will ensure the traveler is appropriately supported during the pre-, peri- and post-travel periods should it be necessary.3 During the pre-travel visit, providers do not simply provide a risk assessment and leave it at that. Rather, we help to manage health risks from identified travel-related hazards within a person’s intended travel environment (eg, based on itinerary, destination, and planned activities). Perhaps, the first important question to ask any traveler is whether or not it is safe to leave the home country based on the person’s current health status. After we assess likely health risks, we develop management strategies with the travel client that help to avoid, prevent, or treat diseases/negative health outcomes, and sometimes to mitigate the consequences or sequelae of these unfortunate events (eg, medical evacuation insurance).

If a person is at risk of a specific vaccine-preventable disease, then we provide appropriate immunization following informed consent. We do not expect a traveler to then remember every aspect of this preventable risk. If immunizations or chemoprophylaxis are applied appropriately, the traveler needs to know very little about these conditions as they are appropriately protected during travel. This then allows the provider to focus on a few key points regarding avoidable or treatable risks through counseling and contingency medications. Humans have a limited working memory for a few chunks or groupings of related information at any given time.4–7 Therefore, the provider has to be efficient with what is discussed during a 30-minute pre-travel consultation. One should not provide an information dump or a “laundry list” of common, but numerous potential hazards facing any given traveler.

Often, we are tempted to “educate” travelers on everything that could go wrong but likely will not go wrong. At some point, a person’s brain will fill up with superfluous information during such a consultation, and the traveler stops listening to the provider. We all have a limit to what we can remember in one sitting. As discussed in the above articles,1,2 30 minutes may not be enough time to “teach” any person all the broad strokes of an entire body of knowledge for a field such as travel medicine. Why would we want to? No person could retain this amount of information even on immediate recall, let alone remembering all these facts later during the trip. And even if we had all the facts, would we use them? Behavioral change models such as the Health Belief Model8 or Transtheoretical (“stages of change”) Model9 suggest otherwise. Knowledge acquisition, awareness, and pre-travel intentions do not necessarily translate into protective health behaviors during travel.10 There is a lot more going on.

We need to stop doing KAP surveys on recall of information as a valid measure of the need or effectiveness of pre-travel consultations. Determining how much a person can remember from a pre-travel lecture is not enough to understand why people adhere to advice or not. The success of the pre-travel consultation needs to be couched in terms of being a form of risk management11 rather than a form of risk assessment.
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(ie, often considered the first component of risk management) or health education (ie, one of the many interventions used in risk management). Perhaps a better measure of our success in pre-travel counseling is to compare the differences between travel clinic attendees and matched non-attendees as it relates to the management of avoidable, preventable, treatable, and mitigatable travel-related health risks or consequences.

For example, do attendees more appropriately cancel or alter travel plans due to clear medical contraindications? Do attendees use fewer unsafe local health care services while overseas? Do attendees have faster and more effective post-travel follow-up through our travel clinic networks, whereas non-attendees with similar health problems wander the circuit of community clinics and/or hospital emergency departments for extended periods of time before being properly treated? The pre-travel consultation primarily connects the traveler with a travel medicine team that can assist as needed. The pre-travel visit also introduces that individual to a travel medicine home, where he or she may return to from time to time during the pre-travel or post-travel phases of trips lifelong. Over time, the traveler will certainly retain more travel risk information, as well as obtain experience with the appropriate use of interventions before, during, or after travel.

In short, we need to stop viewing the pre-travel encounter as a “one-off” event, where we pump people with facts and figures, then jab them with vaccines, and drop a few prescriptions on them. Rather, the visit is part of a continuum of travel health service, as well as an ongoing commitment to support travelers before, during, and after any given trip to a lesser developed country overseas. The pre-travel consultation is a means to create trust and establish an effective provider–client relationship. Trust is perhaps where we need to start measuring our effectiveness first. Without trust, there is poor adherence to interventions that rely on the active participation of the travelers (eg, malaria chemoprophylaxis). Instead of measuring pre-travel intentions or distal post-travel disease outcomes, we should be measuring tangible results from an ongoing travel medicine relationship with our clients compared with those travelers having none at all.

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References
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